

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2005/002089

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C41/06 C07C43/13 C07C43/178 C07C29/10 C07C31/20

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	T. YAMAKAWA ET AL.: "Selective synthesis of 3-methoxy-1-propanol from methanol and allyl alcohol with metal oxide catalysts" CATALYSIS COMMUNICATIONS, vol. 2, 2001, pages 191-194, XP002331426 NLELSEVIER SCIENCE, AMSTERDAM	15
A	the whole document	1
X	T. YAMAKAWA ET AL.: "Synthesis of 3-alkoxy-1-propanol from allyl alcohol by use of metal oxide catalysts in the liquid-phase" STUDIES IN SURFACE SCIENCE AND CATALYSIS., 2003, pages 549-550, XP008048324 NLELSEVIER SCIENCE B.V., AMSTERDAM.	15
A	the whole document	1

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

18 August 2005

Date of mailing of the international search report

3. 09. 2005

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE CA 'Online!            CHEMICAL ABSTRACTS SERVICE, COLUMBUS,            OHIO, US; "Hydrolysis of            mono-tertiary-alkyl ethers of alkylene            glycols"            XP002341169            retrieved from STN            Database accession no. 1982:85044            abstract            -&amp; PATENT ABSTRACTS OF JAPAN            vol. 006, no. 015 (C-089),            28 January 1982 (1982-01-28)            &amp; JP 56 138125 A (COSMO CO LTD),            28 October 1981 (1981-10-28)            abstract</p>	16-28
X	<p>-----            EP 1 201 633 A (E.I. DUPONT DE NEMOURS AND            COMPANY) 2 May 2002 (2002-05-02)            cited in the application</p>	28
A	<p>the whole document            -----</p>	16

# INTERNATIONAL SEARCH REPORT

information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 56138125	A	28-10-1981	JP 1311014 C	11-04-1986
			JP 60034927 B	12-08-1985
EP 1201633	A	02-05-2002	EP 1201633 A1	02-05-2002
			AT 269841 T	15-07-2004
			DE 50006894 D1	29-07-2004

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International application No.  
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### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-15

A method for producing 3-alkoxy-1-propanol from allyl alcohol and an alcohol, optionally followed by hydrolysis. Furthermore 3-alkoxy-1-propanols.

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2. claims: 16-28

A method for producing 1,3-propanediol by hydrolysis of 3-alkoxy-1-propanol. Furthermore 1,3-propanediol.

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